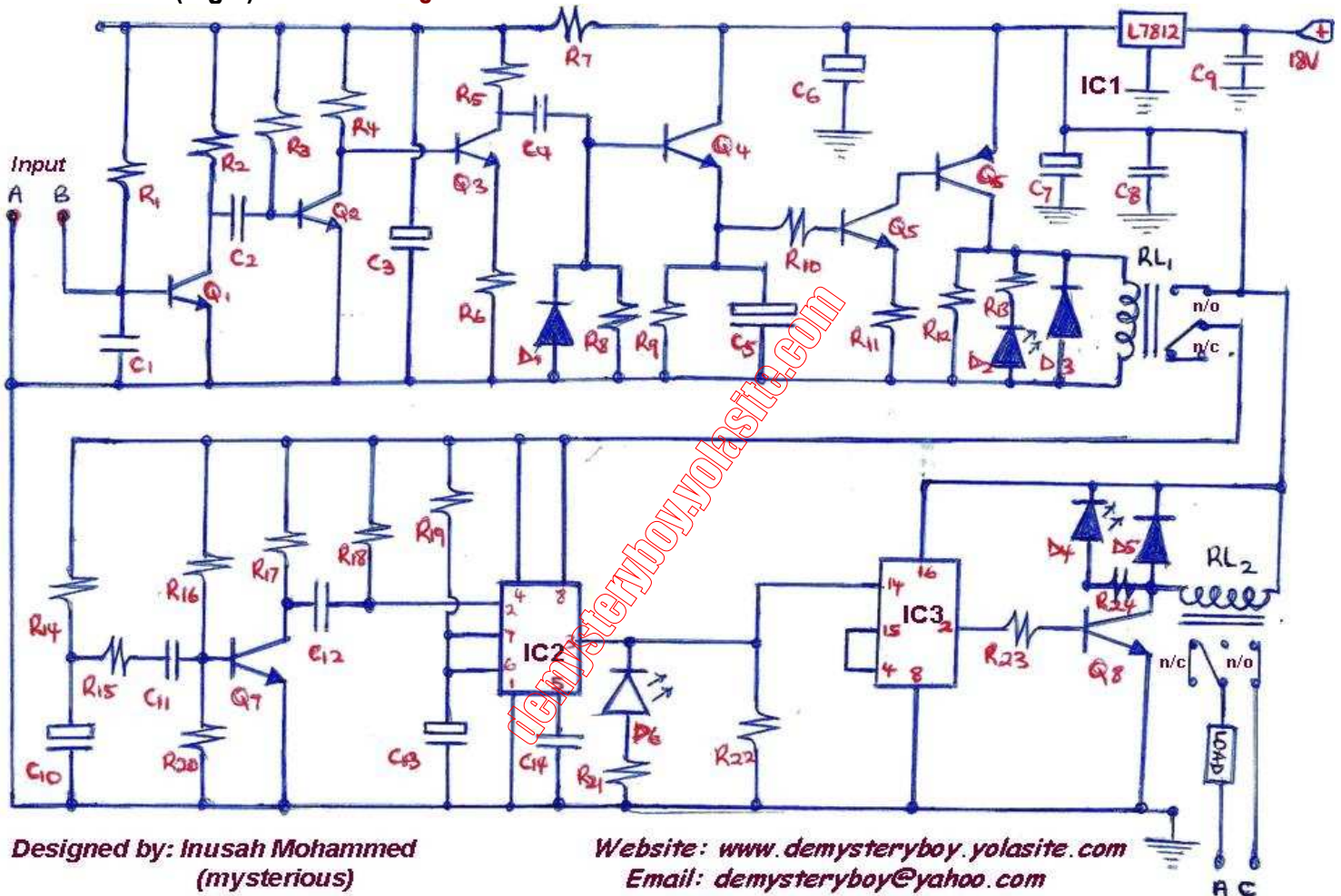


PHONE ACTIVATED POWER SWITCH

www.demysteryboy.yolasite.com

It was all a dream when I used to worry about how I'm gona switch ON/OFF my home appliances such the lights inside and outside my house even when am not at home. This got me into moments of thinking and researching more into circuits where I played with a whole lot of circuits in my electronic laboratory. After all the fiddling from one circuit to the other, I finally came up with this mind blowing circuit that works like magic.

(Fig.1) Schematic diagram

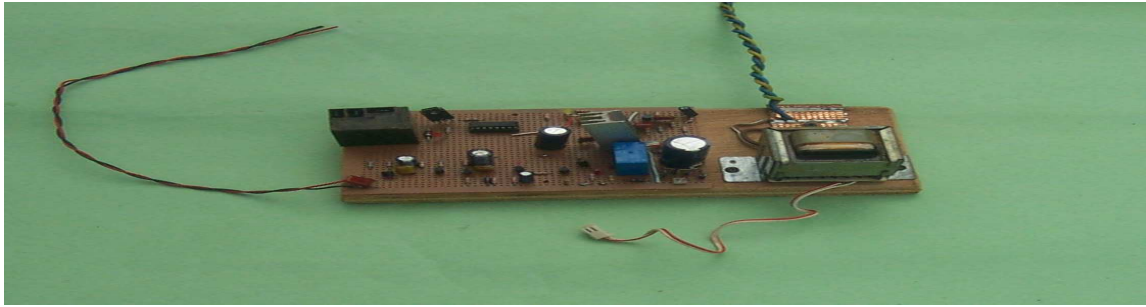


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Description

This circuit (Fig. 1), used in conjunction with a phone, senses the electrical signal generated by the phone on incoming calls (through its loud speaker or vibration motor) to activate (RL1) through the input A/B. RL1 now turned on switches the circuit around Q7 and IC2 upon its activation sends a quick trigger to the input pin 14 of IC3 to activate RL3. The signal from the phone's loud speaker or vibration motor is used as the sensor. It uses readily available, low-cost components and can also be used to safeguard all appliances connected to it which means that during mains power fluctuations, your appliances are safe.



Operation.

When you call the phone (number known to only you and nobody else), the electrical signal generated by the loud speaker or vibration motor which is now connected straight to the input A/B, senses the electrical signal and amplified by transistors Q1 through Q3. The amplified signal is rectified and filtered to produce a low-level DC voltage, which is further amplified by the remaining transistors. The final output from the collector of PnP Transistor Q6 is applied to RL1 to switch on the circuit built around Q7 and IC2. With C10 connected to the input of the circuit built around Q7, charged voltage in C7 sends a pulse through Q7 to IC2 which thereby triggers the input pin 14 of IC3 for its output pin 2 to go high. RL2 is now turned on through Q8 and with A/C connected to mains; power is available at the load. The load can be replaced with a multi-socket extension board which all appliances can be connected.

Parts lists

RESISTORS

R1,R16	1M
R2,R4,R18	10K
R3,R22	330K
R5,R14,R17	3.3K
R6,R7	1K
R8	22K
R9,R20	220K
R10	15K
R11	68R
R12	470R
R13,R21	220R
R15	4.7K
R20	240K
R23	6.8K
R24	560R

CAPACITORS

C1,C2,C12	120n
C3	220uf 16v
C4	100n
C5	47uf 50v
C6	330uf 25v
C7	2200uf 25v
C8,C9,C14	10n
C10	1uf 50v
C11	150n
C13	18n

TRANSISTORS

Q1
Q2,Q3,Q4,Q5,Q7
Q6
Q8

RELAYS

RL1
RL2

DIODES

C1815	D1,D3,D5	IN4001
C548	D2	LED-red
A817A	D4	LED-grn
D1933	D6	LED-yell

IC'S

6-12V	IC1	L7812
12V	IC2	NE555
	IC3	CD4017

Notes

- * The circuit operates off an 18volts D.C. power supply.
- * D2 and D4 indicate the activation of RL1 and RL2 respectively and D6 indicates the negative pulse from the charged voltage through Q7 and IC2 to IC3.
- * The output from the phone's loud speaker or vibration motor is connected directly to the Input A/B.
- * Point A/C is connected to mains power supply while the load can be replaced with an Extension board so that all appliances can be connected.